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FOURTEEN MASTER'S THESES ON READING AND FOUR ON THE EDUCATION OF THE MENTALLY HANDICAPPED COMPLETED AT THE CARDINAL STRITCH COLLEGE, MILWAUKEE, WISCONSIN, IN 1966 ARE SUMMARIZED IN VOLUME 8 IN A SERIES OF RESEARCH ABSTRACTS. THE READING STUDIES--DEALING WITH KINDERGARTEN, ELEMENTARY, SECONDARY, AND ADULT STUDENTS--ARE FOCUSED ON READINESS TESTING AND READINESS PROGRAMS, READING ACHIEVEMENT, READING INSTRUCTION, STUDENT INTERESTS, TEACHER READING HABITS AND INTERESTS, READING CURRICULUM, ABILITY GROUPING, CRITICAL THINKING, STANDARDIZED READING TESTS, AND SELF-CONCEPTS. SPECIAL ARITHMETIC TEACHING METHODS, SEX DIFFERENCES ACCORDING TO DIFFERENT WECHSLER IQ LEVELS, THE EFFECTS OF HOME ENVIRONMENT ON MENTAL AGE AND ACHIEVEMENT, AND TEACHER ATTITUDES ARE STUDIED IN THE THESES CONCERNING THE MENTALLY HANDICAPPED. A CUMULATIVE SUBJECT INDEX FOR THE ABSTRACT SERIES IS INCLUDED. (LS)

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RESEARCH ABSTRACTS

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Vol. VIII, 1966

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RESEARCH
ABSTRACTS

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FOREWORD

The Cardinal Stritch College—a liberal arts college conducted by The Sisters of St. Francis of Assisi—grants master's degrees in two fields of education: one preparing the Reading Specialist, and the other, the Teacher of the Mentally Handicapped.

Fourteen research studies were completed in the field of Reading and four in the field of the Mentally Handicapped in 1966. Abstracts of these studies are included in the present volume. There is now a total of 210 theses available from The Cardinal Stritch College Library through inter-library loan service. Titles are also listed in Master's Theses in Education, Research Publication of Iowa State Teachers College, Cedar Falls, Iowa.

Sister Marie Colette, O.S.F., Ph.D.
Editor

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THE EFFECT OF MANUSCRIPT WRITTING ON THE SUCCESS OF WORD PERCEPTION IN BEGINNING READING IN THE FIRST GRADE

Sister Mary Lois Adrian, S.S.N.D.

PROBLEM. The purpose of this study was to discover the effect of manuscript writing on the success of word perception in beginning reading in the first grade.

The chief object of the writer was to test whether the children's power of word perception was increased through the use of the visual-auditory-kinesthetic method of word study. The children were given training in two methods of study, namely, the visual-auditory method and the visual-auditory-kinesthetic method. The experiment was carried on by means of the rotation of groups method. In this way both groups were used at one time as the experimental group and at another time as the control group.

The specific objectives of the study were to determine:

1. Will writing increase retention of word forms?

2. Will writing stimulate learning of a larger vocabulary?

3. Do those pupils who have difficulty in coordination in writing find word perception more difficult than those who do not have difficulty in coordination?

4. Does writing help to overcome reversals?

5. Does increased ability in word perception affect total reading?

PROCEDURE. The present study was limited to 36 first grade pupils of a southern Minnesota parochial school. They were selected on the basis of intelligence and reading readiness. The children were equated on the basis of the

Kuhlmann Anderson Test, the Steinbach Test of Reading Readiness, and the Wide Range Reading Achievement Test. Each group included 18 pupils. Upon completion of each pre-primer in the reading program, formal and informal vocabulary tests were administered.

FINDINGS. Gains were made on formal tests both by the visual-auditory and the visual-auditory-kinesthetic methods from initial to final testing, but gains were not different at a statistically significant level. On informal tests there was a statistically significant difference between the means in favor of the visual-auditory-kinesthetic method of word study.

SUMMARY AND CONCLUSIONS. The conclusions which seem justified by the results of the study are the following:

1. Pupils in first grade benefited from a visual-auditory-kinesthetic method of word study.

2. Final test scores showed a significant difference in favor of the visual-auditory-kinesthetic method of word study.

3. Teacher observations indicated that the visual-auditory-kinesthetic word study method caused longer memory of letter forms and words and thus contributed to the learning of a larger vocabulary.

4. Because of the continued practice of writing words used in reading, there were fewer reversals among pupils using the visual-auditory-kinesthetic method of word study.

A STUDY OF THE MERITS OF FILMSTRIP-ORIENTED READING INSTRUCTION AS OPPOSED TO TEACHER-DEVELOPED INSTRUCTION AT THE SECONDARY LEVEL

Doris V. Cummins

PROBLEM. The purpose of this research study was to evaluate the effect of a filmstrip reading program on the reading improvement of secondary level students. Improvement in the specific abilities of rate, vocabulary and comprehension, in addition to general reading achievement, was considered. In recent years a trend toward increased use of mechanical aids in teaching reading skills at the higher grade levels has been apparent in professional literature. In general the findings of previous investigations have been that mechanical aids have unique value for many students but that equal gains are possible under the guidance of a capable teacher using a wide variety of methods and materials adapted to the learner.

PROCEDURE. A total of 48 students, all but two of them freshmen, at Nicolet Union District High School in Glendale, Wisconsin, participated in the study during the second semester of the 1964-1965 school year. The semester was divided into three six-week sessions of daily 55-minute periods. Equivalent groups were formed on the basis of chronological age, intelligence quotient, and average reading score. The experimental factor was a commercially prepared filmstrip series, "Tachist-O-Filmstrips" produced by Learning Through Seeing, Inc., Sunland, California. The teacher of the experimental group followed the filmstrip manual for daily lesson plans. The instructor of the control group followed a teacher-oriented program of reading instruction, using daily lessons and selected materials planned by the writer.

Effects of the experimental factor were measured by mean scores obtained on the Gates Reading Survey, the Wide Range Vocabulary Test, and an informal appraisal of speed and comprehension. Appropriate statistical procedures were employed

to test significance of differences between mean scores. Because of the small sample involved, the reasonableness of the null hypothesis was tested on the basis of standard probability value.

FINDINGS. Analysis of the data resulted in the following findings: Experimental vs. Control Group. There was no significant difference between the experimental and the control group at the end of the six-week period in total reading achievement, but the control group's progress was greater.

Experimental Group. The experiment contributed evidence that the use of "Tachist-O-Filmstrips" was of value at the secondary level as measured by the Gates Reading Survey sub-test in level of comprehension. Gains differed significantly from those made by the control group. According to the Wide Range Vocabulary Test, the filmstrip program increased general range and knowledge of word meanings to a greater extent than did the program carried out by the control group.

Control Group. In reading rate the control group showed marked superiority on the Gates Reading Survey. The vocabulary sub-test on the Gates also showed greater gains for the control group, but the difference between the mean gains made by the two groups was not statistically significant.

SUMMARY AND CONCLUSIONS. Analysis of the data obtained in this research study led to the conclusion that a filmstrip reading program and a teacher-developed reading program were equally beneficial at the secondary school level. The following points flow from this conclusion:

1. If funds are not available for the machine approach, a secondary school could succeed without mechanical aids in intensive teacher of reading skills.

2. In terms of teacher effort and preparation, the filmstrip program might be considered more economical since the material is packaged and ready to be presented on a moment's notice. The question of whether it is sufficiently dif-

ferentiated was not explored since the same films were presented to all classes. However, there is no reason why films could not be selected to meet individual differences and varying ability levels.

3. A variation of the control group's program might have yielded better results if there had been (a) more integration of vocabulary, comprehension and speed training rather than the compartmentalized arrangement planned in this study, and (b) greater differentiation of material and approaches to meet individual needs.

4. According to the results of this study, filmstrips are recommended as a part of the reading program but not as a reading program in themselves.

THE CONSTRUCTION AND STANDARDIZATION OF A FIRST GRADE GENERAL READINESS TEST AND EVALUATION OF ITS DIAGNOSTIC AND PREDICTIVE VALUE

Sister Josina Elbert, F.C.S.P.

PROBLEM. The problem of this study was to construct and to standardize a first grade general readiness test.

PROCEDURE. This project entailed the construction and standardization of the STS School Readiness Test over a period from 1961-1966. The initial work consisted of a search of all material written on readiness since the 1930's and a study of available readiness tests. Emphasis was placed on factors which determine school readiness. The initial form of the STS test was constructed and administered in 1961. The sub-tests which it contained were: Visual Discrimination, Visual Memory, Visual Reproduction, Auditory Discrimination (rhyme), Auditory Discrimination (beginning sounds), Auditory Acuity, Motor Control and Speed, Following Directions, Science and Health Information and Vocabulary, Literature (nursery rhymes and fairy tales), Language, Colors of the Spectrum, Numbers, Listening Comprehension and Reading. The test consisted of more than 300 items and was given to 302 beginning first grade pupils in Montana and the state of Washington.

Following correction of the tests, an item analysis was made, and the writer began a revision. Emphasis in the revision was placed on construction of two equated forms of the test. The items were paired for difficulty in terms of the per cent passing each item. Five entire sub-tests which did not contribute materially to evaluation of children's readiness for school or which were difficult for classroom teachers to administer were eliminated. A subjective readiness check list was appended as an additional informational aid for the teacher. Each of the revised forms of the test was composed of 10 sub-tests, totaling 112 items. The revised Form A and Form B of the test were administered during the second week of

September, 1963, to more than 300 first graders in eight schools near Great Falls, Montana. The writer administered the tests. An item analysis was made and the coefficient of reliability was computed for Form A and Form B.

The writer attempted further improvement of the test on the basis of the data gained from the second administration. The items were again paired in terms of difficulty. Each form of the test contained 100 items and eight subtests. In January, 1964 a sample of 100 children took Form A and Form B of the test. Item analysis and correlation for reliability were again computed. The Metropolitan Achievement test was administered to the children who had taken the STS test in the fall of 1963. The scores on Form A were correlated with the Metropolitan Achievement test scores to obtain a measure of validity. The subtest scores were correlated with the total raw scores to obtain internal validity. Following item analysis, the third revision (fourth form) of the test was administered to 100 children aged five, six, and seven years in January, 1965. Each child was given both forms of the test. The writer administered all tests.

In May, 1965, the Metropolitan Achievement test was administered to the children who had taken the STS Readiness test in January. Scores were correlated to obtain validity coefficients. Items were shifted in the tests for better graduation in difficulty. The fifth form of the test was administered to 265 beginning first graders during September, 1965. The administration was supervised by nine classroom teachers in Washington, Montana, and Idaho. The test was then accepted for publication by the Scholastic Testing Company of Bensenville, Illinois. Approximately 300 kindergarten children were administered the test in the spring of 1966. Over 4,300 beginning first graders were administered the final form of the test in the fall, 1966. The chief purpose of the administration was to obtain scores from which national norms would be derived. The final form of the test contained the following subtests: Writing My Name; Colors of the Spectrum; Science, Health, and Social Studies; Numbers; Handwriting; Auditory Discrimination; Visual Discrimination; Listening Comprehension.

FINDINGS. All materials in the STS School Readiness Test were taken from the primary school curriculum. High validity and reliability scores obtained on the test validate it as an indication of success with the primary school curriculum. Background knowledge in the subtest, "Science, Health and Social Studies," was most predictive of school success. In order, the next most predictive tests were: Handwriting, Numbers, Listening Comprehension, and Auditory Discrimination. The least predictive test was Visual Discrimination. A combination of scores was more predictive than any single subtest.

Administration of the fifth Form A and Form B of the test, in September, 1965, yielded the following coefficients: Reliability, +.97, Validity, +.90. In May, 1966, the administration of the sixth form had as one of its outcomes the decision to omit the reading test due to difficulty in administration.

The total number of tests administered throughout the standardization procedure exceeded 7,000.

SUMMARY AND CONCLUSIONS. This study revealed that the contemporary first grader comes to school with a much broader background than the first grader of twenty years ago. Television, primary literature, travel, and parent interest have developed a child who cannot be tested adequately on readiness tests which are more than five years old. Research by the writer proved that class medians on readiness tests over the past twelve years have steadily mounted, thus indicating inadequacy of present measures. Results of this study indicate that material included in a readiness test should be taken from the primary curriculum rather than from areas previously considered as necessary and sufficient for predicting school success.

RELATIONSHIP AND DIFFERENCES BETWEEN READING SUCCESS AND ESTIMATES OF SELF AND OF READING ADEQUACY

Sister Mary Agnes Cecile Feehan, B.V.M.

PROBLEM. The purpose of this research was to study the relationship between reading success of the adolescent and his estimate of himself and of his reading adequacy.

Specific questions investigated were: (1) Is there a relationship between reading success and personal estimate of adequacy? (2) Is there a relationship between low reading achievement and estimate of adequacy? (3) Do successful readers have a higher self-concept than do poor readers? (4) Does intelligence affect self-estimates and estimates of reading adequacy?

PROCEDURE. The study included 150 eighth grade students from Catholic schools in the Montana area. Five schools participated in the survey and five teachers administered the tests. The standardized tests used were the Science Research Association High School Placement Test and the California Personality Test. The former yielded an intelligence quotient and corresponding percentile score, and a reading achievement grade score and percentile rank. The latter test yielded percentile ranks in social and personality adjustment. Only the personality scores were used in this study.

Informal tests consisted of a teacher questionnaire and a student questionnaire. Each student rated himself and each teacher rated all her students. The questionnaires were parallel in form and contained five questions. These questions pertained to estimated reading grade level, oral reading ability, difficulty in basic reading skills, and performance in relation to capacity.

All students whose reading achievement scores were 9.1 or higher were considered to be successful eighth grade readers.

Students whose reading achievement was below 9.1 were considered low achievers. In the sample, 102 pupils ranked in the successful reader category and 48 ranked in the low achiever group. Teachers estimated the reading abilities of students without reference to achievement test scores.

Correlations were computed between grade scores and student estimates of adequacy, grade scores and teacher estimates of adequacy, and between intelligence quotients and personality.

FINDINGS. Analysis of questionnaires and correlation of variables as described above resulted in the following generalizations:

1. There is a moderate relationship between reading success and estimates of reading adequacy for eighth grade students reading at ninth grade level or above, when these students estimate their reading adequacy without knowledge of their reading achievement test scores.

2. There is a moderate relationship between low reading achievement and estimates of reading adequacy for eighth grade students reading below an achievement score of 9.1, when these students estimate their reading adequacy without knowledge of their reading achievement test scores.

3. A very low correlation exists between scores of successful eighth grade readers and measures of their self-concept. No correlation exists between low achievers' scores in reading and measures of their self-concept.

4. There is no relationship between intelligence quotient and measure of self-concept whether for successful readers or for low achievers at the eighth grade level.

5. There is a marked relationship between teachers' estimates and students' self-estimate of reading adequacy among students whose intelligence was in the upper 27 per cent of the total group. There is a moderate relationship between teachers' estimates and students' self-estimate of reading adequacy among students whose intelligence was in the lower 27 per cent of the total group.

6. Comparison of teachers' and students' questionnaires showed that there was disagreement concerning students' reading grade level, a tendency toward agreement concerning oral reading ability, equal percentage of agreement and disagreement concerning areas of reading difficulty, and disagreement in the area of discouragement in reading performance.

SUMMARY AND CONCLUSIONS. Within the limits of this study it was concluded that the relationship between reading success and estimates of self and of reading adequacy may be described as follows:

1. There is a moderate relationship between reading success and estimate of reading adequacy.

2. There is also a moderate relationship between low reading achievement and estimate of reading adequacy.

3. Successful readers do not have a higher self-concept than do poor readers.

4. While intelligence is unrelated to self-estimate for the total group, it is moderately related to agreement between teachers' estimates and students' self-estimates of reading adequacy among students whose intelligence quotients were in the upper 27 per cent of the group.

A COMPARATIVE STUDY OF TEACHER JUDGMENT AND THE METROPOLITAN READING READINESS TEST IN PREDICTING SUCCESS IN FIRST GRADE READING

Sister M. Virginice Kuhn, P.H.J.C.

PROBLEM. The purpose of this study was to compare the accuracy of teacher judgment and the Metropolitan Readiness Test in predicting the reading success of first grade pupils. Specifically, the writer evaluated: (1) to what extent teachers can predict accurately in September the reading success of first-grade children, (2) to what extent check lists of readiness factors improve teacher predictions, (3) to what extent the Metropolitan Readiness Test can predict accurately the reading success of first grade children, (4) to what extent teacher predictions correlate with the Gates Primary Reading Test, and (5) to what extent length of professional experience affects a teacher's predictive judgment.

PROCEDURE. The subjects of this study were 219 children randomly chosen from six first grades of parochial schools in southern Illinois. Six teachers participated in this experiment. They were divided into two groups: more experienced and less experienced. They were also considered individually.

Data to achieve the purposes of this study were obtained from the following instruments: The Metropolitan Readiness Test, Form R, 1950, The Gates Primary Reading Test, Form 1, 1958, rating scales in the Metropolitan Test manual, and a check list of readiness factors based on a similar list in the Faith and Freedom Reader Manual. [1]

After the first two weeks of school the six teachers made a prediction of each pupil's reading success in first grade.

[1]Sister M. Marguerite et al. Faith and Freedom Reader Manual. (Chicago: Ginn and Co., 1961) p. 27-29.

They were guided by the rating scale in the Metropolitan Readiness Test manual. No test scores or check lists were available at this time. At the end of the fourth week of school each teacher made a second prediction after completing a detailed check list for each child. At the same time the Metropolitan Readiness Test was administered and scored by the writer. The following May, the Gates Primary Reading Test was administered to the six first grades.

Statistical interpretation included: (1) the t-test of significance of the difference between means of the first teacher rating and the second teacher rating, of the first teacher rating and the Metropolitan Readiness Test; and of the second teacher rating and the Metropolitan Readiness Test; and (2) coefficients of correlation for teacher predictions at the beginning of the year and the final reading test, the readiness test and the reading achievement test, and the students' subtest scores in the reading achievement test with teacher ratings and the readiness test.

FINDINGS. There was a difference significant at the .001 level of confidence between the first and second teacher ratings for both groups of teachers. There was no significant difference between the two teacher ratings and the standardized readiness test for the less experienced group of teachers. However, there was a difference between the first ratings of the more experienced teachers and the Metropolitan Readiness Test significant at the .05 level of confidence. The second ratings and the Metropolitan Readiness Test yielded a difference significant at the .001 level of confidence.

Correlations between the individual teachers' ratings and the readiness test ratings signified positive similarity in ranking the pupils. The first ratings of the less-experienced teachers' group yielded a correlation of .49; their second rating a correlation of .79. Ratings of the more experienced teachers correlated with the readiness scores .74 (first rating) and .73 (second rating).

SUMMARY AND CONCLUSIONS. Interpretation of data would seem to justify the following conclusions:

1. In most cases teacher judgment was as accurate as the Metropolitan Readiness Test in predicting reading success in first grade.

2. Individual teachers were consistently more accurate in their second predictive rating than in their first rating, as correlated with the Metropolitan Readiness Test and the Gates Reading Test.

3. Predictions at first rating, both by less experienced and more experienced teachers, correlated better with the Gates Reading Test than did the Metropolitan Readiness Test.

4. A higher correlation was found between the second teacher rating and the Metropolitan Readiness Test than between the first teacher rating and the readiness test. This would support the value of a longer period of observation and experience with the child.

5. Teachers improved in their predictive rating with two additional weeks of pupil contact and with the aid of reading readiness check lists.

A COMPARISON OF TWO APPROACHES IN TEACHING READING TO LOW ACHIEVING ADULT WOMEN

Justina M. Marcinczyk

PROBLEM. The main problem of this study was to determine which of two approaches in teaching reading proved more effective as a short-term course for low-achieving adult women. Related problems dealt with the enthusiasm for each program and motivation for continued reading. Answers to the following questions were sought:

1. Which of the two programs shows better total reading gains as measured by the California Reading Test?

2. Which of the two programs yields better results in comprehension as measured by the California Reading Test?

3. Which of the two programs shows better gains in word recognition as measured by the Wide Range Test?

4. Which program was more enthusiastically received?

5. Were there indications that the students would be motivated to continue reading improvement independently?

PROCEDURE. The 20 women in this experiment were equated on three variables, measured by the Beta Intelligence Test, the Wide Range Test, and the California Reading Test. These women formed two groups. Each group received 30 hours of intensive instruction. The groups were formed initially on the basis of availability for the instructional period and manifest interest in self-improvement.

Group A women followed the Words in Color method. Lessons were based each day on the worksheets, word charts, phonic code charts, word building book, book of vowels and consonants, and the book of stories.

Group B women followed a traditional basal reader approach. A balanced program was afforded through a variety of materials. Experience charts were used extensively with the poorest students, Operation Alphabet workbooks with the middle group, and the Minneapolis Public Schools Remedial Reading Materials with the best group.

FINDINGS. In determining which of two approaches in reading proved more effective for low-achieving women, Sign-test statistics were used for individual comparisons and U-test statistics were used for group comparisons.

1. There was no significant difference between pre-test and post-test scores in word recognition as measured by the Wide Range Test for members of the group using the Words in Color method.

2. There was no significant difference between pre-test and post-test scores in word recognition as measured by the Wide Range Test for members of the group using the traditional basal approach.

3. There was a significant difference between pre-test and post-test scores in total reading as measured by the California Elementary Reading Test for members of Group A.

4. There was a significant difference between pre-test and post-test scores in total reading as measured by the California Elementary Reading Test for members of Group B.

5. There was no significant difference between post-test scores in total reading for Group A and Group B as measured by the California Elementary Reading Test.

6. There was no significant difference between post-test scores in word recognition for Group A and Group B as measured by the Wide Range Reading Test.

SUMMARY AND CONCLUSIONS. A study of the findings led to the following conclusions within the limits of this study:

1. Both the Words in Color program and the traditional basal program yield similar results in word recognition as measured by the Wide Range Test.

2. Both programs yielded similar results in total reading as measured by the California Elementary Reading Test.

3. Both programs were received enthusiastically by participants.

4. The instructor judged in both programs that students with intelligence quotients above 80 would be motivated to continue independently in reading improvement. The majority of these women had some reading success, which in itself was motivating.

A COMPARISON OF THE DIFFICULTY OF THE EARLIER AND RECENT EDITIONS OF SEVERAL STANDARDIZED READING TESTS

Sister Mary Jovita Meirick, R.S.M.

PROBLEM. The primary purpose of this study was to make a comparison between the performance on earlier editions and recent editions of standardized reading tests. Specific questions to be answered were:

1. Are present reading tests more difficult than early editions?

2. How do children achieve on present-day tests in comparison with early editions?

3. How do the results from the local group used in this study compare with national norms of earlier and later dates?

4. Are children better in reading today than they were ten or twenty years ago?

PROCEDURE. In order to have a twenty-five year span between the earlier and recent editions, only the Metropolitan Reading Achievement Test and the Stanford Reading Achievement Test were used. This is an acknowledged limitation. The 1929 and the 1954 editions of the Stanford Reading Test and the 1932 and the 1959 editions of the Metropolitan Reading Test were administered within a two-week period.

The participants in the study were 234 sixth grade pupils in four parochial schools in Cedar Rapids, Iowa. The children ranged in levels from below average to above average in intelligence.

The coefficient of correlation was determined by the Pearson Product-Moment method for a comparison between the

early and recent grade-equivalent scores of each of the following: (1) Stanford Paragraph Meaning, (2) Stanford Vocabulary, (3) Stanford Total Reading, (4) Metropolitan Paragraph Meaning, (5) Metropolitan Vocabulary, and (6) Metropolitan Total Reading.

The means were found for each sub-test and total of the Stanford Reading Test and the Metropolitan Reading Test. To compare the means of the early editions with those of the recent editions, the t-test of significance of difference was employed.

FINDINGS. The coefficients of correlation found for the Stanford Reading Tests were moderately high, ranging from .74 for the total reading and for the vocabulary sub-test, to .78 for the paragraph meaning test.

Although the means obtained in the earlier and recent editions were slightly different, the difference was not significant. This indicates that the Stanford Reading Test of 1954 is no more difficult than the 1929 edition.

There was a somewhat wider range in coefficients of correlation for the Metropolitan Reading Tests than there was for the Stanford Reading Test. The correlation for the total was .73, for paragraph meaning, .78, and for vocabulary, .55.

According to the methods used in this study, the Metropolitan Test was found to be easier in the recent edition. There was a difference, though no statistically significant, in both subtests and in the total, between mean scores obtained on the 1932 and 1959 editions. The range of scores on the recent editions is wider than on earlier editions, indicating improved test construction.

The group of Cedar Rapids, Iowa children scored slightly higher on recent tests than on earlier tests, and was well above the national norms on both editions of both tests.

SUMMARY AND CONCLUSIONS. The findings of this study lead to the following conclusions:

1. The Stanford Reading Test of today is no more difficult than the edition of twenty-five years earlier.

2. The lower scores obtained on the earlier edition of the Metropolitan Reading Test indicate that this test for this group was more difficult than the recent edition, although the t-test did not show the difference to be significant.

3. The greater range of scores and larger standard deviation of the more recent editions indicate improvement in test construction over earlier editions.

4. The low ceiling on the early edition of the Stanford Reading Test and on the recent edition of the Metropolitan Reading Test hinder a completely reliable comparison.

5. Scores show that the Cedar Rapids group was well above the national norm on each of the tests.

6. Considering the changing goals and objectives, curricula and grade-placement, promotions and drop-outs, and changes in methods of testing, it appears that children are reading as well as or better than they did twenty-five years ago.

AN EXPERIMENTAL STUDY OF THE EFFECTIVENESS OF FORMAL HOMEWORK AS COMPARED WITH THE EFFECTIVNESS OF FREE READING AS A MEANS OF MAKING GREATER PROGRESS IN FIRST GRADE READING

Sister Mary Neone Novy, O.S.B.

PROBLEM. During the past decade many first grade teachers, educators, and parents have realized more and more that too many first grade pupils are either failures in reading or do not develop reading ability to maximum potential. This study was an attempt to solve this situation by involving parents in the first grade reading program through two techniques of home study, namely, formal homework assignments and free reading. It was further undertaken to determine whether first grade children who received formal homework assignments in reading for a period of six months showed greater progress in reading growth than did children who were encouraged to spend some time in free reading activities at home.

PROCEDURE. Sixty pupils enrolled in two first grade classes in a parochial school in a small city in western North Dakota constituted the population in this experiment. The pupils were divided into an experimental group and a control group and equated on the bases of mental age, intelligence quotient, and reading readiness as measured by the California Short-Form Test of Mental Maturity, Level 0, 1963, edition, and the Metropolitan Readiness Tests, 1950 edition. The Metropolitan Achievement Tests, 1959 edition were administered at the close of the experiment to measure the effects of formal homework assignments and free reading on reading growth.

During the six months of this investigation reading was taught to both groups by the writer. The basal reading program was followed for reading instruction with the Faith and Freedom series of readers as the basic text. Each group was given approximately two hours and fifteen minutes of reading instruction each day. During a fifteen-minute period, formal

homework assignments were checked, assigned, and explained for the experimental group. The homework assignments consisted of exercises from the Think and Do workbooks which accompany the Curriculum Foundation series of readers. This series of readers was used as a supplementary text in the reading program. A comparable period of time was allowed the children in the control group to choose books under the direction of the teacher, for independent reading at home. All tests used in the investigation were administered and checked by the writer.

FINDINGS. Results of the Metropolitan Reading Achievement Tests revealed the following:

1. A difference significant at the .05 level of confidence was found to favor the experimental group in word discrimination.

2. No significant difference was found between groups in word knowledge.

3. A difference significant at the .01 level of confidence was found to favor the experimental group in reading comprehension.

Parent-teacher conferences and teacher observations revealed the following findings:

1. Parents were willing to assist their children with homework.

2. Pupils who carried out formal homework assignments were generally more attentive and more able to respond to directions than pupils who did free reading at home.

3. Pupils who did free reading at home were generally better oral readers than those who carried out formal homework assignments.

SUMMARY AND CONCLUSIONS. From the results of this experimental study, it was

concluded that first grade reading ability can be greatly improved through homework assignments. Parents can be considered a valuable resource through which many children will be able to realize their reading potential. Through grade group conferences, parents can be aided in understanding the reading process and in helping to develop their child's maximum reading capability.

A STUDY OF THE READING PREFERENCES OF NEGRO AND WHITE CHILDREN OF LOW SOCIO-ECONOMIC STATUS

Sister Myra Peine, O.S.F.

PROBLEM. The purpose of this study was to make a comparison of book preferences of Negro and white children of a low socio-economic status in grades seven and eight. A study was made of choices with the following specific objectives:

1. To determine if there were differences between Negro and white children in choice of topics.

2. To note whether choices were affected by environment, that is, if children selected books that were realistic or idealistic.

3. To determine whether there was a difference in choice when books had racial references in the content or on the cover.

4. To determine whether or not the readability affected choice.

5. To determine whether there was greater variation in choices of Negro than of white children.

6. To determine whether there were sex differences in choices, irrespective of race.

This study was limited to 60 Negro and white children attending four schools in a low socio-economic area of a mid-western city. A set of 60 books divided into ten categories was used for the preference selection. The small representation of books and categories placed a second limitation on the study.

PROCEDURE. Seventh and eighth grade pupils from four schools were given the Otis Quick-Scoring Mental Ability Test and the Stanford Advanced Reading Test Form J. On the basis of these test results 30 Negro and 30 white children were selected. A wide range in intelligence and reading levels was represented.

Sixty books were judged and classified according to attractiveness by a committee of five teachers. These books were grouped into six sets, each having representation of ten types of books. Children were first asked to select by title, indicating first, second, third, and fourth choice. Later they were presented the same books and requested to peruse the books before choosing. After the children had viewed all 60 books, choices were tabulated.

FINDINGS. Generally, this study indicated that Negro and white children of low socio-economic status had a similar pattern in reading preferences. The most noticeable difference was manifest in comparison of book preferences of boys and girls.

Specific findings included the following:

1. Upon title selection, Negro children chose more fiction than did white children. The latter more often chose the informational type of book. After scanning, however, percentage and index comparisons revealed more similarity of choice.

2. As a group, both Negro and white children seemed to choose books in which they could identify themselves with characters, things, or places which were real to them.

3. Upon selection by title, Negro children chose books having racial references on the cover while white children did not. Upon more careful perusal of books, however, the reverse was true.

4. Although no readability formula was applied to the books, most were judged to be on or near junior high school level. Attractiveness of cover and format played a more

important part in selection than any other single factor. Type of book seemed to be a second factor in preference. Several books which were most difficult in readability still ranked among the top 30 choices, not because of appearance or readability but because of general interest. In general, readability was not a principal factor considered by the children when choosing a book.

5. When choosing by title only, white children were somewhat more variable in their choices than were Negro children. After scanning the books, however, both groups were in close agreement in their preferences.

CHOICES MADE BY NEGRO AND WHITE CHILDREN OF LOW SOCIO-ECONOMIC STATUS ON THE BASIS OF BOOK TITLE ALONE

Type of Book	%age of Negro children	%age of white children
Mystery	56.2	51.1
Animal	53.4	53.4
Miscellaneous Fiction	46.1	42.3
History	38.9	38.4
Racial Fiction	37.2	42.3
Biography of Women	35.6	37.8
Biography of Religious Women	34.5	35.6
Sports	33.9	33.9

Perhaps the greatest difference in choices of books was noted in the percentage of boys and girls, regardless of race, selecting a particular category. Girls' highest choices were mystery, miscellaneous fiction, biography of women, biography of religious women, and animal stories. Boys' choices in order of magnitude were history, animal stories, sports, mystery, and biography of men.

SUMMARY AND CONCLUSIONS. Conclusions based on the findings of this study were the following:

1. There is a definite need for more books containing identification elements for Negro as well as for all children of low socio-economic status.

2. Enrichment programs should be supplied to meet the needs of children with inadequate experiential background.

3. Greater care is needed in selection of books so that consideration is given to types of books which will meet interest of boys and of girls.

A COMPARATIVE STUDY OF THE INDEPENDENT READING OF FIRST GRADE PUPILS IN HOMOGENEOUS AND HETEROGENEOUS GROUPING

Sister Mary Dominic Rechtorik, V.S.C.

PROBLEM. The present study was undertaken to determine whether there was a significant difference between the number of books read independently and the choice of books made by children in a homogeneous grouping pattern and in a heterogeneous grouping pattern. The principal objectives were to determine:

1. Which group of children does more independent reading?

2. Is there a difference in the type of interest, judged by the topics of books which have been selected?

3. Do those in classes with higher intelligence rating read on topics of more mature interest?

4. Are the choices determined by contact with those in lower intelligence groups?

PROCEDURE. The population comprised 200 children from the first grade of five parachial schools near the city of Pittsburgh, Pennsylvania. Equivalent groups were formed on the bases of chronological age, mental age, intelligence quotient, readiness, and initial reading. The tests administered for equating the groups were: The Kuhlmann-Anderson-Intelligence Test, Form A, The Metropolitan Readiness Test, Form R. and the Stanford Achievement Test, Form K.

The experiment was performed to determine which group did more independent reading, and to discover the interest areas of the children as indicated by their choice of books.

The teaching method employed was that proposed by the manuals which accompanied the reading textbooks. Both groups

read library books weekly. After a careful tabulation of all books read, these were found to be categorized in fifteen areas of interest.

FINDINGS. Comparison of gains made in reading by the experimental group and control group showed statistically significant differences favoring the experimental group in paragraph reading and average reading. These differences were significant at the .05 level of confidence.

Results of the comparison of the number of books read independently and the interest areas showed that the superior children in the two grouping patterns selected the category of living, working and playing as the area of greatest interest and the fine arts as the area of least interest. However, the average group in the experimental grouping pattern selected real animals as the highest interest area, while the control group selected books in the category of living, working, and playing. The lowest preferent was in fine arts, which may be due to the paucity of books in this area, for young children. The lower ability sections in both grouping patterns selected real animals as the area of greatest interest and differed in areas of least interest. There was no definite pattern.

In general the study revealed that the superior as well as the slow children in homogeneous ability grouping read a greater number of books than did children in the heterogeneously grouped classrooms. This difference was statistically significant at the .001 level of confidence. In the case of the average ability groups, however, there was no statistically significant difference between the means of the two groups when the number of books was compared. These data lend support to the common thought that heterogeneously grouped classes meet the needs of the average pupil and supply sufficient challenge.

SUMMARY AND CONCLUSIONS. From the data compiled and interpreted in this study, the following conclusions appear to be valid:

1. Although children retain interest in fantasy and fairy tales, the broad span of children's reading choices serves as

an indication of the need for book publishers and authors of children's first grade books to produce easy books with a variety of interest appeal.

2. According to this research, it was impossible to satisfy the interests of many children in both grouping plans.

3. Books predominantly chosen were about typical living, playing, and working situations. Stories requested about travel and fine arts were not available at first grade level.

4. Difficult vocabulary had the greatest effect on the children's selections of interest areas.

5. Young children within a group are influenced considerably by the choices made by other pupils, especially by those of higher ability whom they desire to emulate.

AN ANALYTICAL STUDY OF MATERIAL TO STIMULATE CRITICAL THINKING AT THE FIRST AND SECOND GRADE LEVEL THROUGH THE USE OF MAGIZINES

Sister Eunice Roch, F.C.S.P.

PROBLEM. This study evaluated a random sampling of ten children's magazines for children aged five to eight on the following broad questions:

1. Are the articles found in the periodicals stimulating for first and second graders?

2. Do the pictures and aids foster critical thinking in children?

3. Are there specific questions which would lend themselves to the development of critical thinking?

4. Do teacher's helps or suggestions provide directives in teaching critical reading?

Specifically, the writer sought to evaluate the contributions made by the context, pictures, and questions supplied in each magazine to the stimulation of critical thought.

PROCEDURE. The first step was to devise an instrument with which to appraise ten children's magazines in terms of their contribution to the development of critical thinking.

The second step was to identify critical thinking skills mentioned by 25% or more of the representative authors consulted for a list of critical thinking skills.

The third step was to determine whether the eleven critical thinking skills identified in step two were employed in the magazines utilized in the study. The overall rating for each of the ten magazines was based on the possibility of using these

skills with the context, pictures, and teacher's questions provided in every fourth issue of each magazine.

The fourth step was to analyze helps or suggestions provided in or with the magazine to determine whether these stimulated critical thought. The writer prepared montages of various exercises, labeled with the respective critical thinking skills which they seemed to foster, in the writer's judgment. These montages may be found in the Appendix of the thesis.

FINDINGS. Eleven skills were mentioned by more than 25% of the authors consulted. These skills were: (1) making comparisons and contrasts, (2) drawing conclusions, (3) distinguishing between fact and opinion, (4) making generalizations, (5) making inferences, (6) problem solving, (7) distinguishing the fanciful from the real, (8) recognizing relationships, (9) recognizing relevancy, (10) relating to personal experience, and (11) making judgments.

Context. Most issues of the magazines had well-developed context from which the teacher could easily foster critical thinking in primary-grade children. Context in the periodicals included 93.7% of the eleven critical thinking skills under consideration in this study.

Pictures. Picture content was found to include 88.3% of the critical thinking skills.

Questions. The writer found that questions were at a minimum in the sample of magazines as a whole. Only 59.3% of the critical skills could be found in the questions that were provided.

SUMMARY AND CONCLUSIONS. Data compiled and interpreted by the writer suggest that the following conclusions are valid:

The content in the magazines analyzed makes a notable contribution in stimulating critical thinking.

Pictures have a significant potential for developing critical thinking, but may need extrinsic direction and motivation.

Not many questions were included in some of the children's magazines. This factor lowered their general rating. Some of the questions in some of the magazines could be better structured to foster critical thinking.

This study suggests that the ability to read and think critically can be developed with the use of magazines because, in general, each magazine analyzed contributed some material for the practical development of critical thinking habits and skills.

A STUDY OF THE READING HABITS AND INTERESTS OF TEACHERS IN GRADES FOUR TO EIGHT IN A RELIGIOUS COMMUNITY

Sister Mary Samuel Vally, O.S.F.

PROBLEM. The purpose of this study was to explore the dimensions, character, and quality of reading habits and interests of teachers in grades four to eight in a religious community. This study was a direct challenge intended to stimulate both the individual religious and the community as a whole to adjust to the demands of our times by promoting a high caliber of reading and of achieving greater amounts of reading.

Three specific areas studied in this research were: (1) interest, (2) selection, and (3) attitudes.

PROCEDURE. The population of the study was the Sisters teaching in grades four to eight inclusive in a religious congregation numbering 934 professed members. The schools staffed by these teachers were in nine states.

Responses from 182 questionnaire returns and 30 personal interviews formed the basis for this survey. The questionnaire items provided data in three areas: (1) general information pertinent to educational background and experience, (2) information regarding professional reading, and (3) information concerning nonprofessional reading and an appraisal of personal reading status. After the questionnaire responses were tallied, the data were classified on the basis of teacher status: middle grade teachers, principals teaching middle grades, upper grade teachers, and principals teaching upper grades.

When the interview list was prepared, the size of the school was another factor considered. An effort was made to secure a representative sampling from Sisters teaching in small, medium, and large-sized schools.

FINDINGS. 1. Interest. There was considerable interest in increasing general knowledge, in promoting professional competence, and in acquiring broader understanding of current events. Findings indicated that most of the teachers read beyond the limits of their particular fields. This was especially true of principals.

Less than half of the total group indicated that they were "very interested" in trends to improve adult reading power, and about the same number said they were "somewhat interested."

Upper grade teachers who were principals consistently led the other three groups both in the caliber of their reading and in the amount of time spent in reading. Only about 30% of the teachers read four or more hours weekly. Yet many of these Sisters did much less reading than they wished, since reading was the highest ranking leisure-time preference listed. Reading was also categorized as a form of therapy for tension. A large number of Sisters expressed their conviction that the apostolate of the Sister today demands continuing education through reading. In general, both questionnaire responses and interview responses indicated a desire for personal improvement through reading.

2. Selection. Data showed that considerably more professional and nonprofessional reading materials were available than were used. Convent, classroom, college and public libraries were listed as sources of reading matter. For the most part, materials of an educational or self-improving nature were read. Current periodicals were widely used because they contained articles that were both short and timely. It appeared that the Sisters preferred news coverage in magazine rather than in newspaper format. Newsweek and U.S. News and World Report ranked as favorites. Professional periodicals reported to be most helpful were the Catholic Educator, the Grade Teacher, and The Instructor. The diocesan weekly was the most heavily subscribed and widely read of all newspapers listed. Three-fourths of the Sisters who answered the questionnaire were reading a book at the time or had read one within a period of three weeks prior to completing the questionnaire. However, the titles and authors submitted showed

the need for guidance in book selection as was emphasized by the teachers themselves. Fewer than half of the Sisters listed professional books used as valuable references.

3. Attitude. Data indicated that a large number of the teachers were eager to meet professional demands. The outstanding obstacles militating against an adequate reading program were lack of motivation, lack of information or guidance to worthwhile materials, lack of adequate reading matter, and lack of time. Surprisingly few Sisters indicated that they considered a slow rate of reading to be one of their problems.

Findings also underscored the great importance of the home and the role of early influences in building a permanent love for, and an abiding interest in, reading.

SUMMARY AND CONCLUSIONS. The interpretation of data gathered in this study seemed to justify the following conclusions:

1. A study of a difficulty mentioned repeatedly—lack of time-might be undertaken and recommendations made to overcome this obstacle to greater amounts of professional and personal reading.

2. A group study of faculty load, ways and means of individual scheduling of time, and an evaluation of the relative utility of activities engaged in, is suggested as a means of finding adequate time for reading.

3. Each teacher might evaluate her own attitude toward the necessity of reading. A task considered important will receive some of the time budget of an individual.

4. This research revealed upper grade principals as rating highest in general reading habits. However, their achievement still leaves much to be desired. For example, these principals gave a relatively small amount of time to reading in the area of administration.

5. There should be an abundance of periodical literature

available, with multiple copies of the more valuable periodicals if number of faculty members warrants this.

6. An adequate library must be provided in every convent, with selections both for professional and general adult reading. Though this study showed that Sisters who have access to libraries use them, the total picture is less than satisfactory.

7. Sisters being interviewed repeatedly expressed pleasure in stimulating conversation. The printed word is needed to nurture and bring to maturity creative ideas for conversation.

8. Since reading improvement at the adult level can greatly aid reading efficiency, efforts to initiate interest in such programs for the Sisters might prove fruitful. Bulletins might be one means of offering suggestions for improved reading techniques. For those particularly interested, a short course in modern reading techniques might be arranged.

9. A discussion of book selection techniques might prove helpful during an annual Educational Conference of the congregation.

AN EXPERMENTAL STUDY OF THE COMPARATIVE VALUES OF A READING READINESS ORIENTATED PROGRAM AND A GENERAL EXPERIENCE PROGRAM AT THE KINDERGARTEN LEVEL

Sister Mary Gennara Welch, O.P.

PROBLEM. The purpose of this study was to determine which of two readiness approaches, reading readiness orientated approach or general experience approach, at kindergarten level had greater value in the development of reading readiness. A secondary purpose was to determine the effectiveness of a readiness program of a basal reading series and worksheet type exercises as compared with the general kindergarten experience program.

Answers were sought to the following questions:

1. Is there greater value in giving children specific exercises in orientation?

2. Is more progress made in developing readiness through specific efforts to build concepts of abstract words?

3. Do specific exercises in listening for rhyming words and likenesses in initial consonant sounds increase auditory discrimination skill?

4. Is visual discrimination increased to a greater degree by formal exercises in perceiving likenesses and differences in color and in the configuration of simple geometric forms, letters, and words?

5. Does naming and recognizing letters of the alphabet develop a greater degree of readiness?

PROCEDURE. The population consisted of 84 pupils from one parochial school of a mid-western city. These were divided into experimental and control groups, numbering

42 pupils each. The groups were equated on the bases of mental age, intelligence quotient, chronological age, and readiness as measured by the Lorge-Thorndike Intelligence Test and the Webster Reading Readiness Test. The equivalency of groups was established by the application of the t-test.

During the four months of the investigation the use of a reading readiness orientated program was the experimental variable. Two 15-minute periods daily were devoted to the development of readiness from Fun With Tom and Betty[1] and Games to Play,[2] with the experimental group. The control group received only incidental readiness training as the need arose in a general kindergarten experience program. No formal materials were provided nor was time set aside for specially planned readiness activities.

At the close of the experiment the Webster Reading Readiness Test was re-administered to both groups.

FINDINGS. After the four-month experimental period, test data gave evidence that the experimental group in the readiness orientated program showed no significant superiority over the control group. Statistical analysis of the test scores showed a difference of 2.67 points between the means of the total readiness scores on the final tests. With a t-ratio of 1.47, this difference was insignificant.

Specific areas of readiness were also evaluated. These areas were: Visual Discrimination, Memory for Word Form, Auditory Discrimination, and Vocabulary. The difference between the means of the groups in Visual Discrimination favored the experimental group and was significant at the .01 level of confidence. The experimental group exceeded the control group on each of the other factors except Auditory Discrimination, but none of the differences was significant statistically.

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[1]David H. Russell and Odille Ousley, Fun With Tom and Betty, (Boston: Ginn and Co., 1961).

[2]David H. Russell and Grace B. Haynes, Games to Play, (Boston: Ginn and Company, 1961).

SUMMARY AND CONCLUSIONS. In the light of findings described above, the following conclusions seem justified within the limitations of this study:

1. Kindergarten pupils who received instruction in a reading readiness orientated program were not superior in general readiness to pupils who received a general experience program.

2. Both experimental and control groups made significant progress in general readiness during the four-month period of the investigation.

3. In Visual Discrimination the experimental group achieved significantly higher than did the control group.

4. Neither group showed notable progress in Memory for Word Forms.

5. There were no significant differences between groups either in Auditory Discrimination or in Vocabulary.

AN EVALUATIVE STUDY OF SELECTED READING CURRICULA ON THE BASIS OF THE EMPHASIS GIVEN TO SEQUENTIAL GROWTH IN THE INTERPRETIVE READING SKILLS IN GRADES ONE TO SIX

Helen Margaret Werner

PROBLEM. The primary problem of this study was to evaluate selected cirricula to determine how effectively the concept of sequential and continuous growth in the interpretive reading skills in grades one to six was developed. The master chart as outlined by the New York Board of Education in Sequential Levels of Reading Growth in the Elementary School[1] was used as a basis for comparison. The study sought to answer these questions:

1. Are interpretive reading skills clearly outlined in terms of sequential growth?

2. Are teachers alerted to the greater importance of attention to the reading process and reading skills rather than specific reading selections?

Secondary to this problem was an analysis of the content and implementation of the curricula to determine how the faculty was stimulated by suggestions and materials as the pupils progressed from level to level. Answers to these questions were sought:

1. Are activities which demonstrate greater depth in interpretation suggested as the child proceeds from level to level?

2. Are these activities adaptable to various instructional approaches, i.e., basal, individualized, multi-level?

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[1]Board of Education of the City of New York. Sequential Levels of Reading Growth in the Elementary School. (New York, Board of Education, February, 1963), p. 8.

PROCEDURE. In order to accomplish the objectives, it was necessary to collect the curriculum guides of school systems in a metropolitan area. Twelve major systems were contacted; of the twelve, eight guides were available for study. After thorough examination, six guides were chosen as representative of the different types of curricula in the area.

As a basis for comparison the master chart of Sequential Levels of Reading Growth in the Elementary School was used. In keeping with the idea of levels or stages, this chart guides the sequential teaching of the interpretive reading skills directly and continuously from phase to phase.

The four categories of skills listed on the master chart were:

1. Getting the Main Thought
2. Finding Details
3. Determining Sequence
4. Drawing Inference

All sub-topics were included, but for practical reasons many of these subtopics were paraphrased.

FINDINGS. The findings regarding the presentation of interpretive skills in a sequential manner indicated that, while all these school systems provided opportunities for their pupils to become familiar with all skills, the following facts were noted:

1. While the content of all six curricula provided for the development of many of the specific skills in each category, none contained all skills.

2. Although some systems included the skills at levels other than those used as a basis for comparison, no pattern of sequential development could be established.

3. While all six school systems had a division between primary and intermediate skills, none listed each skill as peculiar to a specific instructional level.

Study of the content and implementation of the curricula indicated that there were commendable aspects in all six guides, but the following qualifications were made by the writer:

1. Some guides were superior to others in alerting and motivating teachers to the educational needs of the pupils.

2. All of the systems used the basal approach; however, three of them combined it with the individualized reading approach.

3. Suggested activities and educational media were much the same in the six curricula except for variety and extensiveness of each.

4. Certain curricula allowed for a greater amount of variation and flexibility in teacher implementation.

5. Three of the six guides contained a well-developed and well-stated philosophy.

SUMMARY AND CONCLUSIONS. Analysis of obtained data justified the following conclusions:

1. Periodic evaluation and revision by curriculum planning committees would benefit both staff and pupils.

2. There is need for a more moderate gradation in the development of interpretive reading skills.

3. Concentration on specific goals and standards of achievement, especially in the intermediate grades, is needed to provide more continuity in instruction as the child proceeds from level to level.

4. Finally, committees representing the schools in a geographical area are needed to work together as a coordinating committee for the entire metropolitan community.

AN EXPERIMENTAL STUDY OF THE EFFECT OF A SPECIALIZED TEACHING DEVICE ON THE ARITHMETIC ACHIEVEMENT OF MENTALLY HANDICAPPED CHILDREN

Sister Mary Victor Connolly, R.S.M.

PROBLEM. This experimental study was undertaken to determine the effect of a specialized teaching device on the arithmetic achievement of mentally retarded children. The purpose of this study was to determine whether there was a significant difference between the arithmetic achievement of a group of retardates who used a specialized teaching device and that of a matched group of retardates who used a traditional flash card drill method. The special device, the Math Builder, was used to reinforce student skills after the basic concepts had been introduced.

The principal objectives considered in the development of this study were:

1. To provide training in developing accurate responses to basic number facts.

2. To afford practice with basic number facts as met by the child in everyday experiences.

3. To ascertain the effect of training and practice with the Math Builder on the arithmetic achievement of mentally retarded children.

PROCEDURE. Arithmetic facts were presented to the control and experimental groups in the same manner. The dependent variable was the type of drill used. The Math Builder was the device used with the experimental group. For the control group the abacus and flash cards were utilized for drill purposes.

Two groups of 13 retardates each undertook the experiment for a period of 20 weeks. Groups were matched on mental

age, intelligence quotient, and arithmetic achievement. The Stanford-Binet Scale, Form L-M was used to determine the mental age and intelligence quotient of each subject. The Stanford Arithmetic Test, Form J was used for initial testing and Form K of the same test was used for final testing.

FINDINGS. The range of arithmetic scores in the experimental group at final testing was 1.2 years. The difference between the means of initial and final arithmetic achievement tests was almost nine months. The t-value of 19.77 was significant at the .001 level of confidence.

The control group's range at final test was 2.1 years. The mean difference between the means of initial and final arithmetic achievement tests was five months. The t-value of 6.37 was significant at the .001 level of confidence.

The findings indicated significant improvement for both groups, but the mean difference of more than three and one-half months in arithmetic grade scores favored the experimental group. The t-value of 2.83 was significant at the .01 level of confidence.

SUMMARY AND CONCLUSIONS. After a 20-week period the experimental group had achieved a mean arithmetic grade score of 3.80 as compared with a mean grade score of 3.42 achieved by the control group. The mean difference between groups may be attributed to the variable, the Math Builder, which was utilized for drill with the experimental group.

A STUDY OF THE DIFFERENCES BETWEEN BOYS AND GIRLS, AND BETWEEEN BOYS AND GIRLS OF DIFFERENT IQ LEVELS, ON A CERTAIN SELECTION OF SUBTESTS OF THE WECHSLER INTELLIGENCE SCALE FOR CHILDREN

Sister Mary Venard Foley, R.S.M.

PROBLEM. The purpose of the study was to examine the subtest scores which tap the Stimulus Trace[1] factor in a specffic group of retarded and slow-learning children.

The following questions were raised through the medium of this study:

1. Is there a difference between the sexes in the total group and/or in the group below 69 IQ, the group of 70-79 IQ, and the group of 80-89 IQ in Full Scale IQ, Verbal IQ, and Performance IQ?

2. Is there a difference between the sexes in the total group, the group below 69 IQ, the group of 70-79 IQ, and the group of 80-89 IQ in the subtests related to the Stimulus Trace theory, namely, Arithmetic, Picture Arrangement, Vocabulary, and Coding?

Since many recent studies indicate: (1) the retarded subjects is weak in areas of stored information, (2) the retarded subject seems to have more ability in the use of structured, concrete, visual materials, (3) the retarded subject emerges in certain subtests on the WISC with a heavy loading in the Stimulus Trace factor, which involves immediate memory, this study was undertaken to investigate the differential abilities of a selected group of children.

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[1]Alfred A. Baumeister, Claude J. Bartlett, and William F. Hawkins, "Stimulus Trace as a Predictor of Performance," American Journal of Mental Deficiency LXVII (March, 1963), 726-729.

PROCEDURE. The following procedures were used in the present study: Five hundred children had been examined at the Catholic Psychological Center in Atlanta during the period from September, 1957, to June, 1962. From this group, those children were selected whose chronological ages fell between 7-0 and 14-9, and who achieved a Full Scale IQ of 89 or less on the WISC. There were 118 children who met these criteria.

Data gathered on each child included Verbal IQ, Performance IQ, Full Scale IQ, and subtest scores in Arithmetic, Picture Arrangement, Vocabulary, and Coding.

A statistical comparison was made between the sexes on these variables, taking the group as a whole. Further comparisons were made on subgroups divided according to IQ levels: below 69, 70-79, and 80-89.

FINDINGS. Total group. The mean scores of the boys were higher than those of the girls in Full Scale IQ, Verbal IQ, and Performance IQ. These differences were statistically significant on the first two variables. The mean scores of the girls were higher in Coding and Picture Arrangement, while the boys' mean was higher in Arithmetic and in Vocabulary.

Group below 69 IQ. Means significantly favored girls on Total IQ, Verbal IQ, and Performance IQ. Means of the four subtests favored girls slightly.

Group of 70-79 IQ. Differences in the means of total IQ, Verbal IQ, and Performance IQ, favored boys slightly. Girls were higher in Coding and Vocabulary but boys were higher in Picture Arrangement and Arithmetic. None of the differences was statistically significant.

Group of 80-89 IQ. Boys were significantly favored in Total IQ and Verbal IQ. Girls were significantly higher in Coding and Picture Arrangement.

SUMMARY AND CONCLUSIONS. The following conclusions may be drawn on the basis of the findings of this study:

1. No consistent pattern of sex-linked superiority emerged among the WISC subtests selected for the study because of their occurrences in the Stimulus Trace group factor.

2. Chance differences favored girls on every subtest in the group below 69 IQ and on Vocabulary and Coding in the 70-79 IQ group. On subtests of Vocabulary and Arithmetic in the 80-89 IQ group and on Picture Arrangement in the 70-79 IQ group, boys' means were slightly higher than those of the girls.

A COMPARISON OF MENTAL AGE AND ACHIEVEMENT OF BOYS GROUPED ACCORDING TO PROBLEMS ASSOCIATED WITH HOME ENVIRONMENT

Sister Mary Georgeann Kinel, O.S.F.K.

PROBLEM. The purpose of this study was to compare and interpret data on ability and achievement of 35 boys from intact homes and 35 boys from broken homes to ascertain differences in scholastic achievement.

Findings of previous studies indicated that both the family and the school influence the child's attitudes in his formative years. However, disagreement was evident among authors in their conclusions concerning the effects of broken home conditions upon academic achievement.

It was the aim of this study to seek answers to specific questions:

1. Does the environmental factor, broken home, warrant modifications of an educational program?

2. Is it a variable to be considered in designing a specific program in an institutional setting?

PROCEDURE. The subjects for this study were 70 boys selected from a total of 137 boys in the eighth grade at Father Flanagan's Boys' Home, Boys Town, Nebraska. One group of 35 boys was from intact homes and the other group was from broken homes. They were comparable in age, ability, socio-economic and cultural background. Case histories and the Wechsler Intelligence Scale for Children served as the bases for equating the groups. Scores from the SRA Achievement Series, Battery 6-9, Form A, and grade point averages for the current school year provided data for comparison in achievement.

FINDINGS. Analysis of standardized test scores and grade point averages revealed insignificant differences between mean grade equivalent scores on the separate tests of the SRA Achievement Series, with the exception of Arithmetic Reasoning, for which the t-value was significant at the .05 level of confidence. No significant difference was found between the academic grade point averages of the two groups for the school year 1964-1965.

SUMMARY AND CONCLUSIONS. In view of the findings it seems justifiable to state that students from intact homes and students from broken homes were achieving equally well in academic subjects. While there was a significant difference between groups in Arithmetic Reasoning, it was judged that the difference would not merit a change in the basic curriculum but would be met by teacher adaptation of instruction.

It was further judged that much more investigation into multiple factors is necessary before revisions in a curriculum are recommended. Empirically speaking, this has often been the case in educational adjustment, that is, there has been too eager willingness to initiate changes that later proved more harmful than beneficial.

A STUDY OF ATTITUDES OF A RELIGIOUS COMMUNITY TOWARD WORK WITH THE MENTALLY RETARDED

Sister Michael Marie Sweeney, O.S.B.

PROBLEM. There is a great need for teachers and facilities for the mentally retarded. The past 25 years have witnessed increasing interest, training and dedication of religious communities in an effort to meet this need. The attitudes of members of a religious community toward work with the mentally retarded are important in the further development of community work in this field. The present study was intended to evaluate attitudes within a community for the purpose of relating these to future work, and to interest other religious communities in programs for the mentally retarded. Thus, the study was seen as an indirect means of providing for personnel to educate and care for the mentally retarded in the future.

PROCEDURE. In order to obtain an inclusive evaluation of attitudes, all the members of the community of Benedictine Sisters at Ridgely, Maryland received a questionnaire which afforded them an opportunity to express their opinions concerning the present program being offered to mentally retarded children by the community. They were also asked to offer suggestions for improvement of the program. Twenty per cent of the Sisters failed to answer the questionnaire. They then received a personal letter soliciting their response. Finally, personal interviews of a wide sample of the community were undertaken in an attempt to ascertain more specific attitudes toward the efforts of the community.

FINDINGS. Eighty per cent of the 105 members responded to the first questionnaire. This percentage indicated widespread interest in the program presently offered at the Benedictine School. The responses pointed out weak phases of the program and phases in need of improvement. Other responses suggested areas of development for the future.

Sisters responding to the questionnaire endorsed the school but some did so with reservations and indicated these reservations in their suggestions for improvement. No Sister who responded to the questionnaire revealed a completely negative attitude toward work witl. the retarded.

The twenty per cent who failed to respond to the questionnaire but who answered the letter likewise endorsed the program but seemed less informed and/or less interested in the work of the school. Among this group there was a high percentage of negative responses.

Finally, a wide sample of the community was interviewed in order to establish a more positive attitude toward work with the mentally handicapped. Information gathered from these interviews indicated that the community as a whole was favorably disposed toward the work of the school. This positive attitude was especially demonstrated by the administrative council of the community. Sampling of the community indicated that the majority of the members believed that the Benedictine School had contributed much to the community and to mentally retarded children. However, members indicated that the same educational opportunities offered to the teachers at the Benedictine School should be equally available to the teachers in the schools for normal children staffed by the community. These interviews also indicated that the teaching personnel at the Benedictine School should be assigned on a strictly volunteer basis as they have been in the past.

SUMMARY AND CONCLUSIONS. Generally, the attitudes of the members of the religious community at Ridgely, Maryland, toward the work of its members with the mentally retarded were favorable. The general tone of responses indicated that while much has been accomplished for the mentally handicapped served by the Benedictine Residential School, there remained room for improvement in many areas. Criticisms of the program were constructive. The main objection of the majority of members seemed to be directed toward the educational advantages afforded the staff members working at the Benedictine School. This attitude showed a lack of understanding of the need for specially trained

personnel for work with the mentally retarded. Interviews revealed a strong preference for the policy of assigning volunteer personnel to the school. Finally, the study revealed the need of further education for the Sisters of this particular community in the area of special education.

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